State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5379-04

California Type Evaluation Program
Certificate of Approval
for Weighing and Measuring Devices

For:

Hopper Scales Weighing/Load Receiving Elements
Load Cell Electronic
Models: AWB-100 and CWB-100
n_{max}: 1 000
e_{min}: See Table Below
Capacity: See Table Below

Accuracy Class: III L

Submitted by:

R & S Industries, Inc.
103 #5 Orchard Drive
Early, TX 76082
Contact: Keith Ringler
Tel: (817) 783-8000
Fax: (817) 783-8200

Standard Features and Options

Primary weight indications and motion detection are provided by an approved and compatible weight indicator

Model	Capacity	Load Cell Capacity	e_{min}	n_{max}	Dimensions as Tested	Max Distance Between Load Cells
AWB-100	40 000 lb	15 k (4 each)	40 lb	1 000	12' x 76½" x 10'	10'
CWB-100	10 000 lb	5 k (3 each)	10 lb	1 000	66" dia x 88" (cone)	60"

Load Cell: Rice Lake Model RL20000B (Certificate of Approval Number 4979-99)

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: March 11, 2004

Mike Cleary, Director

R & S Industries, Inc.
Hopper Scales Weighing/Load Receiving Elements
Models: AWB-100 and CWB-100

Application: General purpose weighing of construction materials used to make concrete when interfaced with an approved and compatible weight indicating element and/or batch controller.

Identification: An identification tag is attached to the support frame of each weighing element.

Sealing: Each hopper scale has a summing box with adjustable components. The summing box cover is attached with drilled head screws to accommodate a lead and wire seal. Each summing box is located inside its respective junction box with non-sealable covers. Additionally, span, zero calibration, and other configuration parameters are accomplished through the associated indicating element or batch controller.

Test Conditions: The Models AWB-100 and CWB-100 were submitted for evaluation interfaced to a Command Alkon indicator Model Scale Readout (Certificate of Approval Number 3485-90) and a Command Alkon batch controller Model Eagle (Certificate of Approval Number 4293(b)-99). The emphasis of the evaluation was on device design, performance of the weighing elements, and marking requirements. The Model AWB-100 aggregate hopper was tested with 10 000 pounds of known test weights and three substitutions with material for a total weight of 40 000 pounds. Several increasing/decreasing load, discrimination, and return to zero tests were initially performed and then repeated after approximately 45 days and a minimum of 300 normal use weighments. The initial and permanence test conditions as stated above were repeated on the cement hopper Model CWB-100 using 10 000 pounds of known test weights only, with no substitutions.

Results of the evaluation indicate the devices comply with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2004 Edition

Tested By: R. Norman Ingram (CA)